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						OCUMENTS					
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Q	<u> </u>	AA	5,311,550 /	5-10-94	Fouch	e et al.	_				
		АВ	4,630,287 🗸	12-16-86	Arms	trong					
		AC	4,271,527	6-2-81	Arms	trong					
		AD	5,050,188 ′	9-17-91	Di	irr					
		AE	5,398,073 🗸	3-14-95	w	rei ei					
		AF	5,452,015	9-19-95	Huly	alkar					
		AG	5,565,932	10-15-96	Citta	et al.					
	->	АН	5,481,412	1-2-96	Banna	i et al.	_		>		
V	<b>y</b> /	AI	3,909,721	9-30-75	Bussga	ng et al.	-				
				·	OREIGN PATENT	DOCUMENTS					
_8			DOCUMENT NUMBER	DATE	cou	NTRY	CLAS	s	SUBCLASS	TRANS YES	LATION NO
		AJ	0365431	4-25-90	E	P					,X
		AK	0485105	5-13-92	E	Р				x	•
		AL	92/14343	8-20-92	w	0				×	
		АМ	89/08366	9-8-89	W	0				Х	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		AN	0031193	7-1-81	E	Р				Х	
			ОТІ	HER DOCUMENT	S) (Including Autho	or, Title, Date, Pertinent I	Pages,	Etc.j			
		AO	Shinji Matsumoto Telecommunicat	o et al., "200 N ions Review, .	1b/s 16 QAM D January 1982, v	igital Radio-Relay ( vol. 24, no. 1, page	Syste	m Ope 73.	rating in 4 and	5 GHz Band	ds", Japan
		AP	M. Pecot et al., " Image Communi	Compatible Cocation, Octobe	oding of Televiser 2, 1990, no. 3	sion Images, Part 2 3, pages 259-268.	2. Coi	mpatib	le System", Sig	nal Process	ing
8		AQ	Mitsuaki Oshima	, "Constellatio	n-Code Divisio	n Multiplex for Digi	ital HC	OTV", II	EEE, 1992, pag	ges 1086-10	92.
EXAMIN	ER	TR	NH, 7	gr		DATE CONSIDERED		6/	8/05	·	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include cop. this form with next communication to applicant.

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LIST OF R	REFERENC	TRADEMARK OFFI	CANT(S)	APPLICANT Mitsuaki OSHIMA						
		al sheets if necessary)  PTO: December 16		FILING DATE December 16, 2	2003		GROUP			
				U.S. PATENT DOCU	IMENTS		<u>.                                    </u>			
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME		ASS	SUBCLASS		DATE IF	
Alx	AA	4,227,152	10-7-80	Godard e	et al.			-		
	AB	4,525,846	6-25-85	Bremer e	et al.					
	AC	4,751,478	6-14-88	Yoshid	la					
	AD	4,891,806	1-2-90	Farias et	t al.					
	AE	4,903,125	2-20-90	Parker	r					
	AF	4,937,844	6-26-90	Kao			->			
	AG	5,164,963	11-17-92	Lawrence	et al.					
	АН	5,555,275	9-1996	Oshima	a					
Al 5,565,926 10-15-96 Br					al.					
			F	FOREIGN PATENT DO	CUMENTS					
		DOCUMENT NUMBER	DATE	COUNTR	CLA	(SS	SUBCLASS	TRANSLATION YES NO X		
	AJ	0311188	4-12-89	EP				х		
	AK	0329158	8-23-89	EP				X		
	AL	64-5135	1-10-89	JP	•-			х		
	АМ	63-28145	2-5-88	JP				х		
	AN	62-133842	6-17-87	JP	-			х		
	<del></del>	ОП	HER DOCUMENT	S) (Including Author, T	itle, Date, Pertinent Pages	, Etc.)				
Zy/	AO	Tricia Hill et al., " COM-31, June 1	"A Performance 1983, no. 6, pag	e Study of NLA 64 ges 821-826.	1-State QAM*, IEEE	Transac	tions on Comm	nunications,	vol.	
Ey.	AP	Hideki Ishio et al	I., "A Proposal	of a Carrier Digita	l Transmission Syst	em Usin	ig Multi-Level A	PSK", page	es 1-20.	
Je -	AQ	Shanmugam, "D	igital and Anak	og Communication	n Systems" 1979, p.	272.				
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*EXAN			DOCUMENT NUMBER	DATE	NAME	CL	\ss	SUBCLASS	FILING (		
		AA	5,105,442	4-14-92	Wei						
		АВ	4,048,572	9-13-77	Dogliotti et al.	_					
		AC	5,282,019	1-25-94	Basile et al.						
		AD	5,311,547	5-10-94	Wei	_					
		AE	5,267,021	11-30-93	Ramchandran et al.	~					
	·	AF	5,038,219	8-6-91	Yamashita et al.						
		AG	5,087,975	2-11-92	Citta et al.						
	>	АН	5,086,340	2-4-92	Citta et al.						
		AI	5,243,629	9-7-93	Wei						
				f	FOREIGN PATENT DOCUMENTS						
- Ed	7/		DOCUMENT NUMBER	DATE	COUNTRY	CLA	\ss	SUBCLASS	TRANSI YES		
		AJ	53-137657	12-1-78	JP	<b>6</b> 2			х		
		AK	0282298	9-14-88	Europe				х		
		AL	0392538	10-17-90	Europe				х		
		AM	0490552	6-17-92	Europe				х		
		AN	0506400	9-30-92	Europe				х		
			ОТ	HER DOCUMENT	S) (Including Author, Title, Date, Perti	nent Pages	, Etc.)				
G	>	AO	Khaled Fazel et 1085	al., Combined	multilevel coding and multires	solution	modula	lion, February 8	, 1993, Pag	es 1081-	
		АР	P. Hoeher et al., Global Telecom	, Performance munications Co	of an RCPC-Coded OFDM-ba onference "Globecom '91", De	sed Dig ecember	ital Aud 2-5, 19	io Broadcasting 91, Vol. 1 of 3, l	(DAB) Syst Pages 2.1.1	em, IEEE - 2.1.7	
Sy.	4/	AQ	K. M. Uz et al., ( Pages 283-292	Combined mult	iresolution source coding and	modula	tion for	digital broadcas	st of HDTV*,	1992,	
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G <sub>R</sub>	AA	5,142,353	8-25-92	Kageya	ma et al.	-				-	
	АВ	5,197,061	3-23-93	Halbert-La	ssalle et al.				·		
	AC	5,291,289	3-1-94	Hulyalk	kar et al.						
	AD	5,166,924	11-24-92	Мо	ose	<					
	AE	4,940,954	7-10-90	Aube	rt et al.						
	AF	5,128,758	7-7-92	Azadeg	an et al.	-					
	AG	5,038,402	8-6-91	Rot	bins	-					
	АН	5,638,112	6-10-97	Bestle	er et al.	-	· · · · · ·				
				OREIGN PATENT	DOCUMENTS						
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ay	AI	0448492A1	9-25-91	Eui	торе	_				Х	
	AJ	0485108A2	5-13-92	Eui	оре	-			X		
	AK	0525641A2	2-3-93	Eur	торе				Х		
	AL	0540231A2	5-5-93	Eur	оре				х		
W.	AM	0531046A2	3-10-93	Eur	оре	-			Х		
		ОТІ	HER DOCUMENT	S) (including Author	or, Title, Date, Pertinent	Pages, I	Etc.)				
Sign of the second	AN	K. M. Uz et al., N	Multiresolution	Source and Ch	nannel Coding for I	Digital	Broade	cast of HDTV,	1992, Pages	61-69.	
	AO	Nambi Seshadri Fading Channel	et al., Multi-Le Vol. 4, No. 3,	vel Block Code May-June 199	ed Modulations wit 3, Pages 325-334.	h Une	qual Er	ror Protection	for the Rayl	eigh	
de	AP William F. Schreiber, Spread-Spectrum Television Broadcasting, SMPTE Journal, August 1992, Pages 538-549.										
EXAMINER	1/6	INH J	Ton	···	DATE CONSIDERED	6	18	101		<u> </u>	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy this form with next communication to applicant.

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				U.S. PATENT DOCUMENTS					
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CIV	ASS	SUBCLASS	FILING D	
They	AA	5,063,445	11-5-91	Nishizawa et al.	-				
	АВ	5,819,000	10-6-98	Oshima					
	AC	5,999,569	12-7-99	Oshima					
84/	AD	5,892,879	4-6-99	Oshima					
			!	FOREIGN PATENT DOCUMENTS					
Ty		DOCUMENT NUMBER	DATE	COUNTRY	CIV	ASS	SUBCLASS	TRANSI YES	
	AE	7-99522	4-11-95	Japan				abstract	
	AF	7-79415	3-20-95	Japan				abstract	
	AG	5-75568	3-26-93	Japan				abstract	
	АН	86-07223	12-4-86	wo		<u> </u>	<u> </u>	х	
	AI	2 187 611	9-9-87	Great Britain				х	_
	AJ	85/04541	10-10-85	wo				х	
	AK	04-196822	7-16-92	Japan				abstract	
	AL	2-166979	6-27-90	Japan				abstract	
	AM	64-74836	3-20-89	Japan				abstract	
	AN	53-108215	9-20-78	Japan				abstract	
		ОТ	HER DOCUMENT	(S) (Including Author, Title, Date, Perti	inent Page	s, Etc.)			
Gy-	AO	Martin Vetterli et Systems and Sig	t al., Multiresol gnal Processin	lution Coding Techniques for I ng, Volume 3, May 1992, Page	Digital Tes 161-1	elevisio 87.	n: A Review, M	lultidimensio	nal
	AP	Ezio Biglieri et a	il., Introduction	n to Trellis-Coded Modulation v	with App	lications	s, April 6, 1992,	, Pages 173-	207.
W/	AQ	English Languaç	ge Abstract of	European Patent No. 93 30 75	575				
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	MINER FIAL		DOCUMENT NUMBER	DATE	NAME	CLA	ss	SUBCLASS		DATE IF		
		AA	4,636,876	1-13-87	Schwartz	-						
		AB	4,855,692	8-8-89	Kennard et al.							
		AC	4,873,701	10-10-89	Tretter							
		AD	4,958,360	9-18-90	Sari							
		AE	5,115,453 }	5-19-92	Calderbank et al.	-						
		AF	5,168,509	12-1-92	Nakamura et al.	-						
		AG	5,600,672	2-4-97	Oshima et al.	•						
	2	АН	6,049,651	4-11-00	Oshima							
9		Al	6,256,357	7-3-01	Oshima	•						
				F	OREIGN PATENT DOCUMENTS							
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	<u>/</u>	AJ	0122805	10-24-84	EP	•			х			
		AK	63-180280	7-25-88	JP	-			abstract			
		AL	64-68144	3-14-89	Japan				abstract			
	7/	AM	5-218978	8-27-93	Japan	· <u></u>	₹			х		
\$		AN	3-69295	3-25-91	Japan					х		
			ОТІ	HER DOCUMENT(	S) (Including Author, Title, Date, Pertir	ent Pages,	Etc.)					
		AO	Kazuhiko Nitado Conference on C	ri, Synthesis of Communication	Multichannel Orthogonal VS s, June 14-16, 1976, Volume	B Signal 1, Page:	s by Qu s 3-25 -	adrature Metho 3-29.	od, 1976 Inte	ernational		
		AP	Thomas M. Cove	er, Broadcast C	channels, IEEE Transactions	on Inform	nation T	heory, January	/ 1972, Page	es 2-14		
8		AQ	"Optimum Weigh COM-26, No. 6,	ited PCM for S June 1978, Pa	peech Signals*, Sundberg, IE ges 872-881.	EE Tran	sactions	on Communic	cations, Volu	ıme		
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copthis form with next communication to applicant.

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				U.S. PATENT DOCUMENTS						
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Cay -	AA	5,170,413	12-8-92	Hess et al.	-	-	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
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Sy	AD	57-39629	3-4-82	Japan	-	-		abstract		
	AE	58-161547	9-26-83	Japan				abstract		
	AF	63-180222	7-25-88	Japan	<u> </u>	<del></del>		abstract		
	AG	92/22162	12-10-92	wo		<del></del>		X		
	АН	2-94814	4-5-90	Japan	<u>-</u>			abstract		
	AI	61-70861	4-11-86	Japan	ļ ·			abstract	· .	
	AJ	2-218279	8-30-90	Japan	<u> </u>			abstract		
	AK,	2,095,435	5-10-92	Canada	ļ	<del>•</del>		×		
	AL	91/20137	12-26-91	wo				X		
	AM	2-141049	5-30-90	Japan					X	
	AN	2-195732	8-2-90	Japan				abstract		
	AO	5-167633	7-2-93	Japan	-			abstract		
	AP	2-260726	10-23-90	Japan					х	
	AQ	58-161427	9-26-83	Japan	_			abstract		
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a	AJ	2-154583	. 6-13-90	Japan	•			abstract	
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W	AO	Shigeki MORIYAMA Spring National Cor Part 2, p. 406, Marc	nvention Recor	Propagation Charac rd, The Institute of El	teristics at VI lectronics, Info	IF and UI ormation	HF bands in U and Communi	rban Area", 1 cation Engine	991 ers,
84	АР	Yasuhiro ITO et al., Terrestrial Digital To	"Adaptive We elevision Broad	ighted Code Division dcasting", ITE Techn	Multiplexing ical Report Vo	(AW-CDI	M) Transmissio D. 13, pp 27-32	on System for February 25	i, 1993
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